Market Driven Environment

Micron exits military SRAM market 1992

Elantec announces exit from monolithic military market

TI exited from class S market 4Q 1993

Seeq exits military E2 and PROM market 3Q 1994

AMD announced exit from military market August 1994

Allegro (Sprague) exits market August 1994

XICOR prunes NMOS products 1994

Zilog announced discontinuance of several NMOS products June 1995

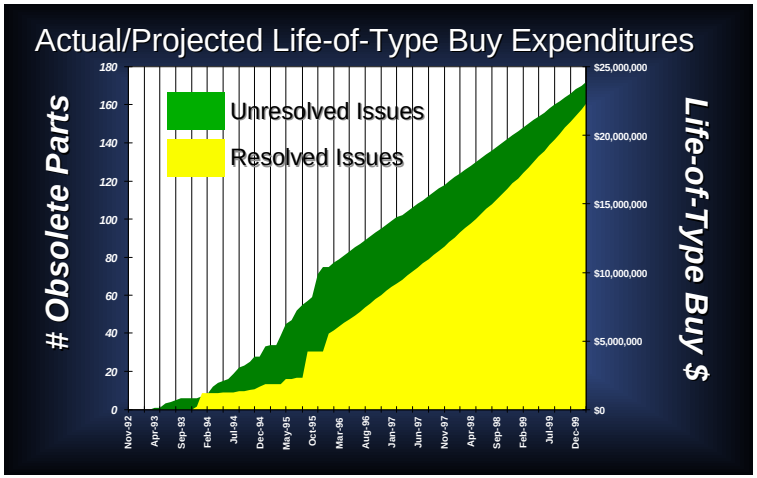
MOTOROLA

PHILIPS

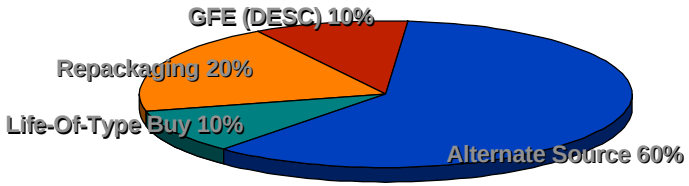
intel

Real Contractor Cost Issues

F15 Electronic Subsystem
F14 Upgrades Planned



- Multifunctional Team
- Weekly Meetings - Track all Critical Parts
- 274 Issues Resolved Since Inception (20 Life-of-Type Buys)
- $250K Life-of-Type Budget (Contractor Risk)



TADS/PNVS
Parts Obsolescence
Management Plan

Risk Mitigation Strategies

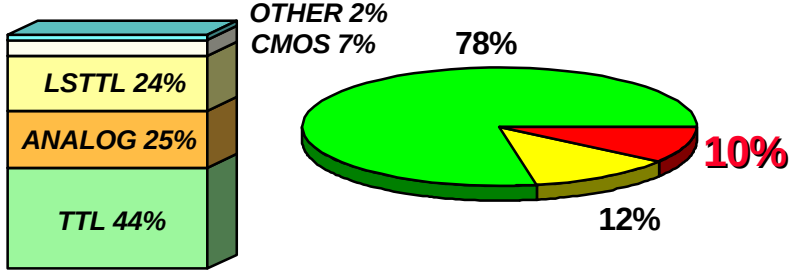
Life of Type Buys
Reclamation
Substitution
Emulation

Aftermarket Manufacturers
New Source Development
CCA Redesign
Inventory Searches

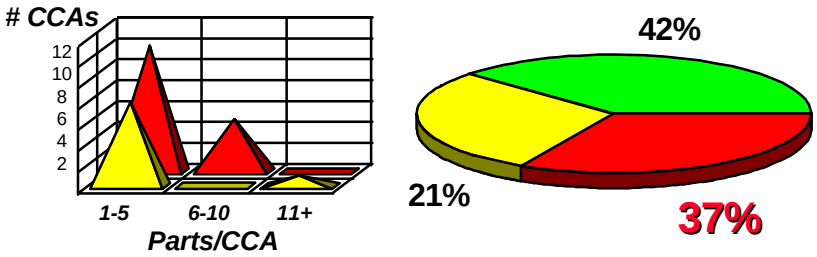
- **Constant Management** on a program-by-program basis with a multi-functional team **including the customer** . What may work great for one program will not satisfy another
- Develop **Strategic Supplier Relationships** , periodically **review all program parts** with suppliers for market longevity, sales volume, and alternate technologies available
- **All tiers of the supply chain must have OM programs in place** (system contractors, subcontractors, and piece part manufacturers). OM should be an **integral part of the parts management process** .
- **DON'T FOCUS ON JUST THE COMPONENT-LEVEL SOLUTION**

The Component-Level Solution May Not Be the Best Choice

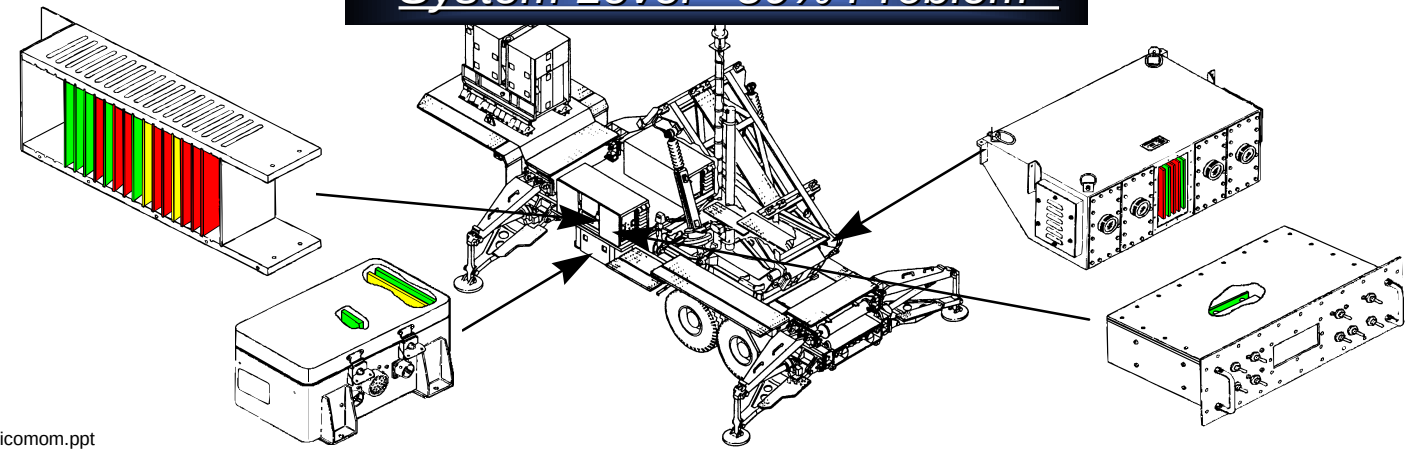
Component Level - 10% Problem



Assembly Level - 37% Problem



System Level - 50% Problem +



Standardization

- Standardization is increasingly dependent on the available **Supplier Base** and will decrease as contractors move towards the use of commercial parts and pursue obsolescence risk mitigation strategies

- New innovative ideas to move away from part number standardization to **Technology** standardization provide a lower cost/higher benefit approach

- Product design is evolving from a piece part based logistic support to an **Open Architecture** approach

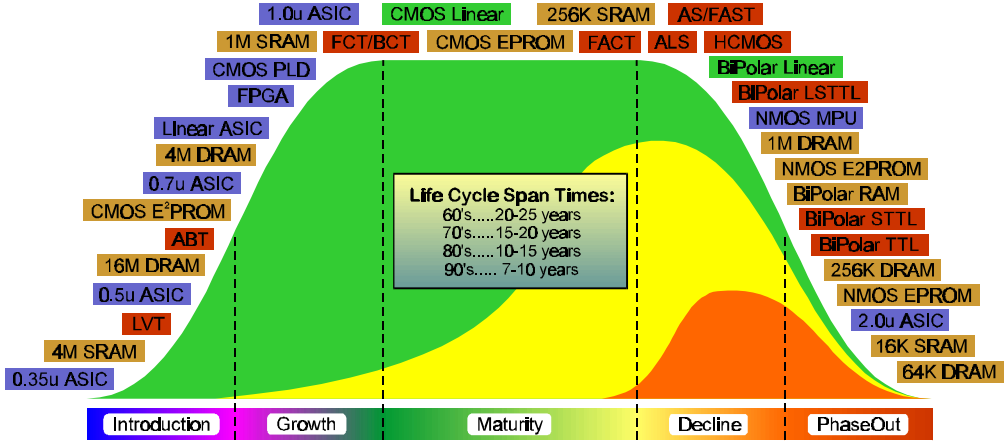
Technology Road Map

Market Segment
- Program Need
- Program Bid
- Program Insertion

Technology Development Segment
- Model Development
- Simulation
- Design
- Build
- Test/Characterization
- Device Validation
- Model vs. Test
- Device Productization
- Device Qualification
- Ready for Bid

Obsolescence Risk
- LOW
- MEDIUM
- HIGH

Technology
- MPU / VLSI
- Memory
- Digital Logic
- Analog



Obsolescence
- Redesign
- Emulation
- Alternate Source Dev
- Reclamation
- Last Time Buy
- Commercial Usage
- NDI Utililization

3-5 years | 7-25 years | 10-30 years

New Technology Development
(IR&D, ATD)

Program Development and System Deployment
(EMD, LRIP, Production)

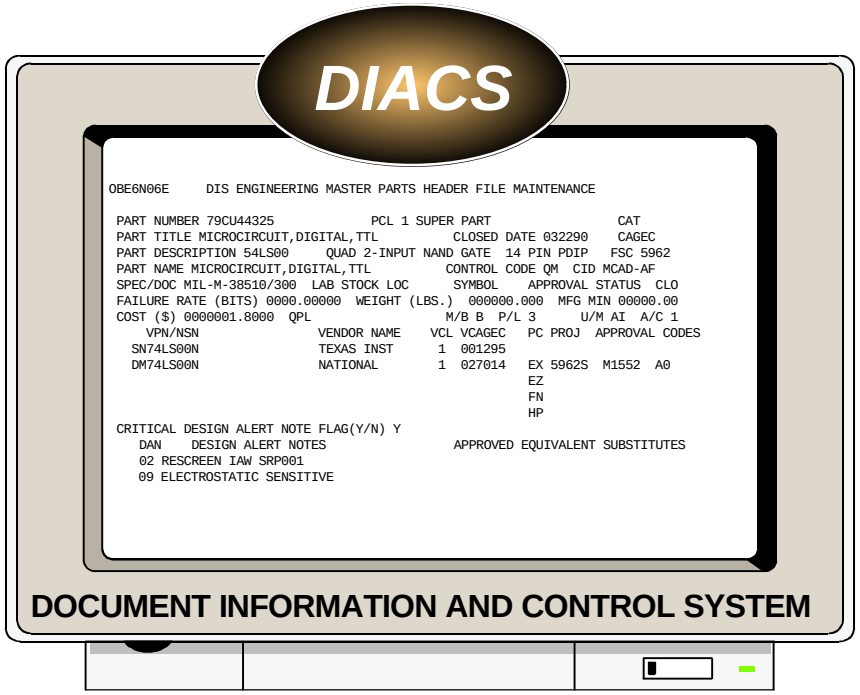
Field Support Logistics

Standardization - New Approach

Use of on-line databases to retain technical and supplier information for parts

Data is available to customer as part of technical data package

Use of vendor nomenclature - SCDs only where technically required



KEY ELEMENTS

- ✓ Data under password control
- ✓ Complete sourcing data maintained
- ✓ Computer lock-out of obsolete parts
- ✓ ID of parts/technology for new design

EXAMPLE: Controlled Commercial Part

A virtual part number established by components engineering
Internally controlled / Transparent to engineering

DIACS:	**Vendor Equivalent PN's**
79CU44325	**SN74LS154J**
	DM74LS154N